

## **Recycled Content Commercial Carpet Information Shared by PPPL on the 5/23/01 E013101 Teleconference**

**PPPL's Experience with commercial grade recycled content carpet. Polyester and polypropylene versus nylon qualities will be mentioned.**

- PPPL has experience with Commercial Grade carpeting with recycled content in the pile. We have only used nylon pile carpet. We have NOT yet located a good commercial grade polyester pile carpet.

### **Nylon 6,6 or 6,6 nylon [ I have seen it refered to both ways]**

Information from: <http://www.dupont.com/nylonrugfibers/html/rugcnylon.html>

There are four synthetic fibers in widespread use in the rug market: Type 6,6 nylon, Type 6 nylon, polypropylene and polyester. Each of these fibers has specific strengths—and, as a result, more or less appropriate end uses. DuPont invented nylon in 1938 and chose Type 6,6 nylon because it delivers superior performance. Type 6,6 nylon has a tighter molecular structure than competitive nylon fibers, which accounts for its unique balance of strength, durability and washfastness. Type 6,6 nylon offers superior resistance to stains, outstanding pile height retention, and unsurpassed resistance to matting and crushing—far better than polypropylene or polyester. In end uses where water is an issue, such as bath rugs and accent/scatter rugs used in kitchens or at entryways, some moisture absorption is desirable. This minimizes water transfer to other surfaces, which prevents slipping hazards and other undesirable conditions. Type 6,6 nylon offers moisture absorption far better than polypropylene or polyester.

- For info on 6,6 nylon manufactured by Solutia go to <http://www.ultronvip.com>
  - Ultron renew 6,6 nylon is 100% **post-industrial fiber** and polymer products created during Solutia's nylon manufacturing process before they enter the waste stream. The web site for Solutia information is:
  - There is also recommended cleaning by Solutia on this web site:<http://www.ultronvip.com/Maint/maint2.htm>

### **Nylon 6 or 6 Nylon [Again I have seen it refered to both ways]**

This is the type of pile we will be using in our upcoming cafeteria renovation scheduled to take place in mid-June.

Info from: <http://www.infinitynylon.com/usa/main/newsstory/infinity.asp>

Honeywell has established a true milestone for the nylon industry and the environment. Now the nylon in post-consumer nylon 6 products, such as carpet made with Anso® nylon, can be captured, renewed, and manufactured into brand new, first-quality nylon products.

Info from <http://www.infinitynylon.com/usa/main/infocenter/renewablenylon.asp>

#### **Downcycling**

A form of recycling where carpet fibers are separated and remelted for use in non-critical plastics applications. This is the standard practice for recycling carpet

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fibers of nylon type 6,6. Eventually, the nylon quality is degraded to the point where it can no longer be recycled and is disposed, typically in landfills. PET soda bottle recycling into carpet fibers is also a form of downcycling since the resulting fibers are disposed at the end of the carpet life.

### **Closed-Loop Recycling**

The most sophisticated form of recycling where carpet fibers are chemically renewed in a depolymerization process and manufactured into first-quality carpet fibers again. A true closed-loop process allows sustainable renewal of fibers over and over again without loss of any properties and without ever being landfilled. This allows maximum value recovery of the original materials. Nylon type 6 is renewable in a true closed loop process using new, breakthrough technology.

### **Overview of PPPL successes in purchasing recycled carpet.**

PPPL has evaluated Shaw Contract, Interface and Mohawk Commercial.

We have installed Shaw carpet with EcoSolution Q™ solution pile in renovations of hallways and offices. We have NOT seen any problem with the product. In fact the first area we completed ~ 3 years ago was the Princeton Area Offices for the DOE located at PPPL. Jeff Makiel was involved with the product selection for this area. Shaw Contract carpet pile has to contain EcoSolution Q™ solution dyed nylon fiber to be considered recycled content carpet. This will be on the specification on the carpet sample. EcoSolution Q™ solution dyed nylon fiber produced with recycled post-industrial and post-consumer nylon. EcoSolution Q affords high performance, aggressively designed carpet at significant value compared with products of conventional nylon.

For Shaw go to this web site:

[http://www.shawcontract.com/html/html/home/sha\\_home.shtml](http://www.shawcontract.com/html/html/home/sha_home.shtml)

Go to this sub site on the Shaw Contract web site:

[http://www.shawcontract.com/html/html/inforum/sha\\_inf\\_download.html#sustainability](http://www.shawcontract.com/html/html/inforum/sha_inf_download.html#sustainability)

There you can select info on EcoSolution Q™.

You also can view the current GSA contract with Shaw at:

[http://www.shawcontract.com/html/html/inforum/sha\\_inf\\_download.html#government](http://www.shawcontract.com/html/html/inforum/sha_inf_download.html#government)

The warranty information can be viewed at:

[http://www.shawcontract.com/html/html/inforum/sha\\_inf\\_download.html#warranties](http://www.shawcontract.com/html/html/inforum/sha_inf_download.html#warranties)

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### **Mohawk Commercial Carpet EPP Info:**

<http://www.mohawkcommercial.com/>

For our upcoming cafeteria renovation to start ~ June 15,2002 we will be utilizing Mohawk Commercial carpet with **Infinity Renewable Nylon**, from the Mohawk Commercial Group **does meet the EPP criteria of 25% post consumer content; here is the web page that describes the Infinity Nylon product:**

<http://www.infinitynylon.com/usa/ushome.asp>

The product being used in the cafeteria renovation is FEATHERGRID, by Mohawk Commercial:

CONSTRUCTION:

Tufted / Ultra Performance System

SURFACE TEXTURE:

Textured Loop

GAUGE:

1/10

PILE THICKNESS:

.132 in.

STITCHES PER INCH:

11.0

FACE YARN:

Colorstrand **Infinity** Solution Dyed  
Nylon

YARN WEIGHT AS TUFTED:

32 Oz. Per Square Yard

DYE METHOD:

Solution Dyed

DENSITY:

8,727

WEIGHT DENSITY:

279,272

STOCK WIDTH:

12'

PATTERN REPEAT:

2.4"W x 1.8"L

IAQ CERTIFICATION:

40904952

FLAMMABILITY:

Class 1

SMOKE DENSITY:

NBS Smoke Density Chamber:  
Less than 450

STATIC PROPENSITY:

70/20 AATCC-134: Under 3.5 KV

## **Recycled Content Commercial Carpet Information Shared by PPPL on the 5/23/01 E013101 Teleconference**

SOIL RELEASE:

Fluorochemical Treatment

WARRANTIES:

Lifetime UPS Warranty

**Lifetime of Carpet is defined by The Mohawk Group to be the lifetime of the original purchaser for a particular installation. The entire warranty is on:**

[http://www.mohawkcommercial.com/tmg\\_warranties/ups.html](http://www.mohawkcommercial.com/tmg_warranties/ups.html)

Calling 800-554-6637 & asking for the sales representative that covers your area of the country can obtain the GSA pricing.

This will also be an excellent opportunity for PPPL through the contractor working with Mohawk Commercial to use the Mohawk Evergreen Recycling Program. With this program the old carpet pile is recycled back into nylon to make new carpet. The old carpet would NOT go to a landfill but be recycled.

I will let you all know how well cafeteria installation went with a full report this summer.

- **price comparisons with virgin carpet**
  - the prices were within our budget. Most major commercial carpet manufacturers are manufacturing carpet that meets EO 13101 and is cost competitive
- **color comparisons with virgin carpet**
  - the colors looked the same virgin product vs. recycled content
- **quality comparisons with virgin carpet**
  - the carpets in the DOE area are fine after 3 years.